

A Clinical Study of *Khadiradi kashaya* in *Purishaj krimi* With special reference to Worm Infestation

Research article

Danga SK^{1*}, Bombarde DT², Pinge CD³, Gulhane CM⁴, Petkar Shubhangi⁵

1. MD (*Kayachikitsa*), 2. Professor, Dept of *Panchkarma*,
Govt. Ayurved College & Hospital, Nagpur.

3. MD (sch) S.V.N.H.T's Ayurved Mahavidyalaya Rahuri Factory, Ahmednagar,

4. MD (*Panch.*) Institute for Post Graduate Teaching & Research in Ayurveda, Gujrat,

5. BAMS (sch) Vimladevi Ayurved College & Hospital, Chandrapur

Abstract

In *Ayurveda*, the diagnosis & treatment of *Krimi* described in details in all *Samhita*. In human body there are two types of *Krimi* – *Sahaj* & *Vaikarik Krimi*. Among them, *Vaikarik Krimi* is harmful to human being. It is said that *Krimi* may be one cause for *Kushtha*, *Pandu*, *Grahani*, and *Karshyata*. Aims & Objective: To evaluate the efficacy of *Khadiradi kashaya* in *Purishaj krimi* & its co-relation with worm infestation through *Ayurvedic* & modern texts. Material & Methods: The clinical study of this work was carried out in the Department of *Kayachikitsa*. Patients were selected as per selection criteria from OPD & IPD of the *Kayachikitsa* department of the hospital. Discussion: It is observed during study that many patients are coming with complaints of recurrent cough and cold, headache, urticaria, abdominal pain and diarrhoea which are relating to worm infestation also. Modern medicine is mainly focused on bacteria, virus, parasites in comparison with *krimi* however it is a quite neglected in *Ayurveda* as it mainly focus on balance of *doshas* & *agni* not *krimi*. Conclusion: *Khadiradi kashaya* used in this study proves very good utility in the management of *Purishaj krimi*; it has very appreciable result in 7 main symptoms of *Purishaj krimi*.

Keywords: *Purishaj krimi*, *Khadiradi Kashay*, *Gomutra*, *Nidan – parivarjan*, *pathya-apathya*.

Introduction:

Ayurveda is a science of life that reveals what is appropriate as well as auspicious for a happy and long life of a human being. In *Ayurveda*, various types, diagnosis & management of *Krimi* described in details in all *Samhitas*. In human body there are two types of *Krimi* – *Sahaj* &

Vaikarik Krimi. (*Charak Viman sthan 7/9*) among them *Vaikarik Krimis* are harmful to human being. It is said that *Krimi* is itself one of the cause for *Kushtha*, *Pandu*, *Grahani*, *Karshyata* etc.

In present & fast forward life people are lacking in awareness about nutrition & diet, due to this many patients become sufferer of *Krimi* & they remains as it is or without undiagnosed. However children are more sufferer in comparison with adult, but adult are also not uncommon. Because at present, today in the community, peoples are mostly favour non veg diet, fast food, milk & butter product, sweet product, faulty prepared

*Corresponding Author:

Danga Sunder Singh Kastur Singh

C/o Wandhare Child Care Hospital,
8-A, Dubeynagar, Hudkeshwar Road,
Nagpur-34

Email-sunder147@gmail.com

Contact No - +91 - 9372045685

food or fermented food and all these factors aggregate in outcome of *Krimiroga*.

Aims & Objective

- To evaluate the efficacy of *Khadiradi kashaya* in *Purishaj krimi*.
- To study *Purishaj krimi* & its correlation with worm infestation through *Ayurvedic* & modern texts.

Material & Methods

The clinical study of this work was carried out in the Department of *Kayachikitsa*, Govt. *Ayurveda* Hospital, Nagpur.

Material:

- Those patients suffering from '*Purishaj krimi*' (Worm Infestation) and attending the OPD and IPD of the Hospital were selected for study randomly irrespective of age, sex, religion and socio-economic status.
- Khadiradi kashay* (Decoction) was prepared according to drug and procedure mentioned in the textbook of '*Yog-Ratnakar*' (*Krimichikitsa*) & *Bhaisajyakalpana*, respectively.
- Along with *Khadiradi kashaya* fresh *Gomutra* of healthy cow was taken as an *anupan* prescribed by *Yog-Ratnakar*. In case of unavailability of fresh *Gomutra*, *Gomutra-Arka* was used. According to *Ayurveda Go-Arka* bears the same properties as like *Gomutra*. (*Arkaprakash*)

Methods:

Patients fulfilling the criteria of diagnosis were selected and investigated in details according to the Performa & written consent was taken from each patient. With all routine investigation, Stool examination is done for ova, cyst, occult blood or adult worm to rule out worm infestation. Anal swab were taken in heavy infection. In this study, 60 patients were selected & divided them in to two

groups viz. experimental & control. *Khadiradi kashaya* prepared as per guideline of *Bhaishajya Kalpana* and 40 ml of *kwath* (*Sharangdhar Samhita Madhyam khand 2*) twice a day was administered to the patients for the 7 days. In control group, *Krimikuthar Rasa* tab of 250 mg given twice for 7 days.

Group Management: Experimental Group and Control Group:

Sr. no.	Experimental Group	Control Group
No. of Patients	30	30
Drug	<i>Khadiradi kashaya</i> & <i>Gomutra</i>	<i>Krimikuthar Rasa</i>
Dose	40 ml twice a day	250 mg twice a day
Duration	7 days	7 days
Follow up	7, 14, 21 days.	7, 14, 21 days

In *Purishaj krimi* the diet plays a definite role in the management. Therefore specific diet regimen was advised to all the patients on the basis of *Nidan - parivarjan* and *pathya- apathya*. Weekly follow-up of patients was taken to look for the effect of therapy.

Diet advised during treatment was as follows:-

<i>Pathya</i> -	<i>Takrasadhith Yavagu, Tikta, Katu Rasapradhan Ahar</i>
<i>Apathya</i> -	<i>Ushnodak, lasuna, etc. Madhur, Amla Ahar, Sweet (Sugar, jaggary), Shushka, Sheet Ahar, Cold water, Fermented food (Idali, dosa, etc.), Vishmashan, Adhyasan, Virudhohar etc. Milks Product, bakery items, oily product. Non-veg (Chicken, Mutton, etc.)</i>

Criteria for Diagnosis:

Depends upon clinically features, described in the text of *Ayurveda* as well as modern texts. Gradations of symptoms of *krimi* were done for *Vidbheda*, *Udarshool*, *Vishtambha*, *Gudkandu*, *Parushata*, *Panduta*, *Romharsha*, *Agnisadana*, *Karshyata*, *Jwar*, *Vivarnata*, *Hridroga*, *Bhrama* and *Bhaktadwasha*.

Pathological investigation i.e. stool for ova, cyst and adult worm were considered for confirming diagnosis.

Patients in the age group of 12-60 years who fulfilled the criteria for diagnosis & were selected irrespective of sex, religion, and socio-economic status.

Criteria for rejection of patients:

Patients having any systemic major disorder like TB, AIDS, Cancer, Diabetic and cardiac major disorder, as well as pregnant patients were excluded. Discontinuations of treatment or follow up were also rejected.

Criteria for selection of the patients:

Observations & Results:

In this trial, 60 patients of *Purishaj krimi* were studied. All collected data (Before treatment & after treatment) has analyzed statistically.

Table No. 1 Showing Distribution of 60 Patients of *Purishaj krimi* (Worm Infestation) for Stool Examination before Treatment

Sr.No	Parasite type	Exp. Group	Control Group	Total	%
1.	Ascaris Lumbricoids	10	08	18	30.00
2.	Giardia Lamblia	06	04	10	16.67
3.	E.Hystolytica	02	04	06	10.00
4.	E.Hysto & E.Coli	02	00	02	03.33
5.	E.Vermacularis	01	02	03	05.00
6.	E.hysto &G.Lamblia	02	00	02	3.33
7.	Negative	07	12	19	31.67

Before treatment, total 30 % patients were of *Ascaris lumbricoids*, 16.67% were of *Giardia lamblia*, 10% of *E. hystolytica* 3.33% of *E.hysto & E.coli*, 5 % were *E.vermacularis*, 3.33% of *E.hysto & G.lamblia* and 31.67% were negative for stool examination.

Table No 2. Showing Distribution of 60 Patients of *Purishaj krimi* (Worm Infestation) of Stool Examination After Treatment

Sr.No	Parasite	Exp. Group	Control Group	Total	%
1.	Ascaris Lumbricoids	01	01	02	03.33
2.	Giardia Lamblia	00	01	01	01.67
3.	E.Hystolytica	01	02	03	05.00
4.	E.Hysto & E.Coli	01	01	01	01.67
5.	E.Vermacularis	01	00	01	01.67
6.	E.Hysto &G.Lamblia	00	00	00	00.00
7.	Negative	27	25	08	13.33

After treatment, 3.33% patients were of *Ascaris lumbricoids*, 1.67% of *Giardia lamblia*, 5% of *E. hystolytica* 1.67% of *E.hysto & E.coli*, 1.67 % were *E.vermacularis*, 0% of *E.hysto & G.lamblia* and 13.33% were negative for stool examination.

Table No. 3 Showing Diet wise Distribution of 60 Patients of *Purishaj krimi*.

Sr. No.	Diet	Experimental Group		Control Group		Total	
		No. of Patients	%	No. of Patients	%	No. of Patients	Percentage %
1	Vegetarian	14	46.67	16	53.33	30	50
2	Mixed	16	53.33	14	46.67	30	50

Diet – In this study in both group 50-50% patients were having vegetarian & mixed type of diet.

Table No. 4 Showing the Distribution of 60 Patients Taking Dominant *Rasa* in the Diet:-

Sr. No.	Dominant Rasa	Experimental Group		Control Group		Total	
		No. of Patients	%	No. of Patients	%	No. of Patients	Percentage %
1	Madhur	25	83.33	22	73.33	47	78.33
2	Amla	21	70.00	14	46.67	35	58.33
3	Lavan	14	46.67	19	63.33	33	55.00
4	Katu	04	13.33	15	50.00	19	31.67
5	Tikta	08	26.67	01	03.33	09	15.00
6	Kashyay	03	10.00	09	30.00	12	20.00

Among 60 patients 78.33 were having habit of *madhur rasa* was dominant in their daily diet followed by *amla* & *lavan ras* 58.33%.55% respectively.

Percentage of Relief in Symptoms Score:-

In Experimental Group, Percentage of relief was 95.65 % in *Vidbheda*, 86.21% in *Udarshool*, 75.68 % in *Vishtambha*, 90% in *Gudkandu*, 80% in *Parushata*, 78.05 in *Panduta*, 71.43 in *Romharsha*, 76.92% in *Agnisada*, 85.71, 100, 80, 33.33, 91.67, 96.15% in *Karshyata*, *Jwar*, *Vivarnata*, *Hridroga*, *Bhrama* & *Bhaktadwesa* was observed respectively.

In Control Group Percentage of relief was 75 % in *Vidbheda*,78.57% in *Udarshool*, 71.43 % in *Vishtambha*, 66.67% in *Gudkandu*, 100% in *Parushata*, 88.89% in *Panduta*,100% in *Romharsha*, 90.48% in *Agnisada*, 75, 100, 50, 00, 100, 82.35 in *Karshyata*, *Jwar*, *Vivarnata*, *Hridroga*, *Bhrama* & *Bhaktadwesa* was observed respectively..

Table No.5 Showing Wilcoxon Signed Rank Test of Symptom Score of Experimental Group

Sr.No	Symptoms	Mean		± SD		±S Ed		P Value	Result
		BT	AT	BT	AT	BT	AT		
1.	<i>Vidbheda</i>	0.76	0.03	1.07	0.18	0.19	0.033	<0.0001	***
2.	<i>Shool</i>	1.93	0.21	1.17	0.63	0.21	0.11	<0.0001	***
3.	<i>Vishtambha</i>	1.23	0.30	1.10	0.53	0.20	0.09	<0.0001	***
4.	<i>Gudkandu</i>	0.33	0.33	0.47	0.18	0.08	0.03	<0.005	**
5.	<i>Parushata</i>	0.33	0.06	0.47	0.25	0.08	0.04	<0.005	**
6.	<i>Panduta</i>	1.36	0.33	0.92	0.54	0.16	0.09	<0.0001	***
7.	<i>Romharsha</i>	0.23	0.06	0.43	0.25	0.07	0.04	<0.05	*
8.	<i>Agnisada</i>	0.86	0.20	1.04	0.48	0.19	0.88	<0.0001	***

9.	<i>Karshyata</i>	0.23	0.03	0.43	0.18	0.07	0.03	<0.05	*
10	<i>Jwar</i>	0.46	-	0.50	-	0.92	-	<0.0001	***
11.	<i>Vivarnata</i>	0.16	0.03	0.37	0.18	0.06	0.033	>0.05	-
12.	<i>Hridroga</i>	0.10	0.06	0.40	0.25	0.07	0.04	>0.05	-
13.	<i>Bhrama</i>	0.40	0.03	0.62	0.18	0.11	0.03	<0.05	**
14.	<i>Bhaktadwasha</i>	0.86	0.03	1.30	0.18	0.23	0.03	<0.05	**

*Considerably quite significant, **very significant *** extremely significant - not significant.

Table No.6 Showing Total Effect Of therapy Of 60 Patients of *Purishaj krimi* (Worm Infestation)

Sr. No	Effect Of Therapy	No. Of Patients			Percentage %		
		E.G.	C.G.	Total	E.G.	C.G.	Total
1.	Cured	25	21	46	83.33	70.00	76.67
2.	Markedly Improve	05	09	14	16.67	30.00	23.33
3.	Improved	00	00	00	00.00	00.00	00.00
4.	Unchanged	00	00	00	00.00	00.00	00.00

Total Effect of Therapy:-

In Experimental Group, 83.33% patients were completely cured while 16.67 patients markedly improved.

In Control Group, 70% % patients were completely cured while 30% patients markedly improved.

Totally, 76.67 % % patients were completely cured where 23.33% patients markedly improved.

For stool examination –

Before Treatment in Exp group- 23 (76.67%) patients were positive for ova, cyst, or adult worm while 07 (23.33%) negative, in control Group 18(60%) positive and 12 (40%) negative.

Totally 41 (68.33%) patients were positive and 19 (31.67%) negative.

After Treatment in Exp group- 03(10%) patients were positive for ova, cyst or adult worm while 27 (90%) negative, in control Group 05 (16.67%) positive and 25 (83.33%) negative.

Totally 08 (13.33%) patients were positive while 52 (86.67%) patients were negative.

Discussion:

Intestinal parasite is a prime trouble in human beings. It is observed that many patients with recurrent cough, cold, headache, urticaria, abdominal pain and diarrhea are seen positive for worm infestation. *Acharyas* also had the knowledge of *Krimi* and are considered as the causative factor of different disease. In this study drug content of *Khadiradi kashaya* has properties like *krimighna*, *kandughna* some drug like *Nishottar* has

laxative property while *triphla* & *trikatu* has *deepan* as well as *pachan* property. *Gomutra* has *lekhan* & *sara* property. Overall this formula was dominantly having *katu,tikta* & *kashaya rasatmak guna* & having *tikshna guna* along with *ushna virya* which results in destruction of *samprati* of *Purishaj krimi*. So whole contents are helpful in increasing digestive power by improving *agni*, by the laxative action of *Khadiradi kashaya* *krimi* could have been removed from *amashay* &

ultimately getting all symptoms were relieved.

Conclusion:

Khadiradi kashaya used in this study proves very good utility in the management of *Purishaj krimi*; it has very appreciable result in 7 main symptoms of *Purishaj krimi*. There was no any side effect of this drug was observed during trial; it is very chief & easily available, hence it would become better choice of drug for *Purishaj krimi*.

Acknowledgment:

HOD Dept of Kayachikitsa, Govt. Ayurveda College & Hospital, Nagpur.

References:

- 1) Baghel M.S.. A classified directory of all India P.G. and Ph.D. thesis of Ayurveda. 1st edition , Jamnagar, Mridu Ayurvedic Publication;1997
- 2) Gurumukh S. Sainani. A.P.I Text Book of Medicine. 7th Edition, Bombay Association of Physician's of India. 1997. Page no. 1142-1157
- 3) Kulkarni P.H. .Ayurveda for child health care, 1st Edition, 2002.
- 4) Hunter John. Harrison's Principle of Internal Medicine, 13 editions USA; by Published by Mc. Grawhill health Professions Division. Page No1352-1358
- 5) Harshmohan. Textbook of Pathology –. By published by Jaypee Brothers Medical publisher EMCA House, Delhi. Page No165-168.
- 6) Nadkarni K.M.. Indian Materia Medica .3rd Edition Bombay, Popular Book Depot. 1994,
- 7) Vijayarakshita. Madhava Nidana by Madhavakara with Madhukosha commentary. 1st Edition Delhi, Motilala Banarasidasa. page No132-138.
- 8) Mahajana B.K.. Methods in Biostatistics 6th Edition, New Delhi; Jaypee Brothers,1997.
- 9) Ranjeetray Desai. Nidana Chikitsa Hastamalaka. 1st edition Calcutta. Shri Baidanatha Bhavana, Pvt.Ltd. 1953. Page No257-298
- 10) Rajvaidya Prabhaskar Nam-Bhatta.,Bhavaprakasha by Bhavami. 1st edition Shastri Girijashankar Mayashankar, Sastushahitya Vardhak Karyalay, 1966.
- 11) Hariprasada Pandyan. Bhava Prakasha, Vidhyayotini Bhasa Tika, 5th edition,Varanasi Chokhambha Sanskrita Shirija 1980.
- 12) Chunekar K. C. Bhava Prakash Nighantu, Bhavamishra and Hindi Comm., 1st Edition Varanasi, Chaukhambha Bharati Academy, 1988.
- 13) Kashinath Shashtri, Dr. Gorakhnath Chaturvedi. Charaka Samhita – Vidhyotini hindi Comm. Eighth edition Varanasi; Chaukhambha Bharati Academy,1992.
- 14) Bhagavandasa R.K., Sarma,Charak Samhita, English translation Chaukhambha Sanskrita series, Varanasi.
- 15) Jayram C.K. & Panikar. Text Book of Medical Parasitology 4th edition,New Delhi;Jaypee Brothers, Medical Publisher, 2002. Page 72-85.
